

WHAT IS CLAIMED IS:

1. A method for controlling an image forming apparatus for forming a color image by superposing images formed at image forming units, each provided for a corresponding one of a plurality of color components, said method comprising:

- a first skipping step of skipping part of a main-scanning synchronizing signal in a first image forming unit for forming an image of a first color component;

- a first generation step of generating a sub-scanning reference signal based on the main-scanning synchronizing signal skipped in said first skipping step;

- a first exposure-scanning control step of controlling exposure scanning in a second image forming unit based on the main-scanning synchronizing signal skipped in said first skipping step and the sub-scanning reference signal generated in said first generation step;

- a second generation step of generating a sub-scanning reference signal in the second image forming unit for forming an image of a second color component, based on the sub-scanning reference signal generated in said first generation step;

- a second skipping step of performing skipping by determining a timing of skipping of the main-scanning synchronizing signal in the second image forming unit based on the sub-scanning reference signal generated in said second generation step; and

- an exposure-scanning control step of controlling exposure scanning in the second image forming unit based on the main-scanning synchronizing

signal skipped in said second skipping step and the sub-scanning reference signal generated in said second generation step.

2. A method according to Claim 1, wherein said first and second skipping steps are executed in a low-speed mode in which image formation is performed at a speed lower than an ordinary image forming speed.

3. A method according to Claim 2, wherein in the low-speed mode, a rotation speed of a rotating polygonal mirror is maintained at the same value as in an ordinary mode.

4. A method according to Claim 1, wherein each of the plurality of image forming units has a generation step of generating a reference signal for controlling a rotation phase of a rotating polygonal mirror.

5. A method according to Claim 4, wherein in said generation step, a plurality of reference signals having different phases can be generated, and one of the generated reference signals is selected and used.

6. A method according to Claim 1, wherein in said second generation step, an output timing of the sub-scanning reference signal in the second image forming unit is determined by counting a predetermined number of main-scanning synchronizing signals before skipping in the second image forming unit, starting from a time when the sub-scanning reference signal in the first image forming unit is output in said first generation step.

7. A method according to Claim 4, wherein in said second generation step, an output timing of the sub-scanning reference signal in the second image forming unit is determined from a degree of deceleration from an ordinary image forming speed, and by counting main-scanning synchronizing signals before skipping in the second image forming unit, having a number corresponding to a phase difference between a reference signal in the first image forming unit and a reference signal in the second image forming unit at an ordinary image forming speed.